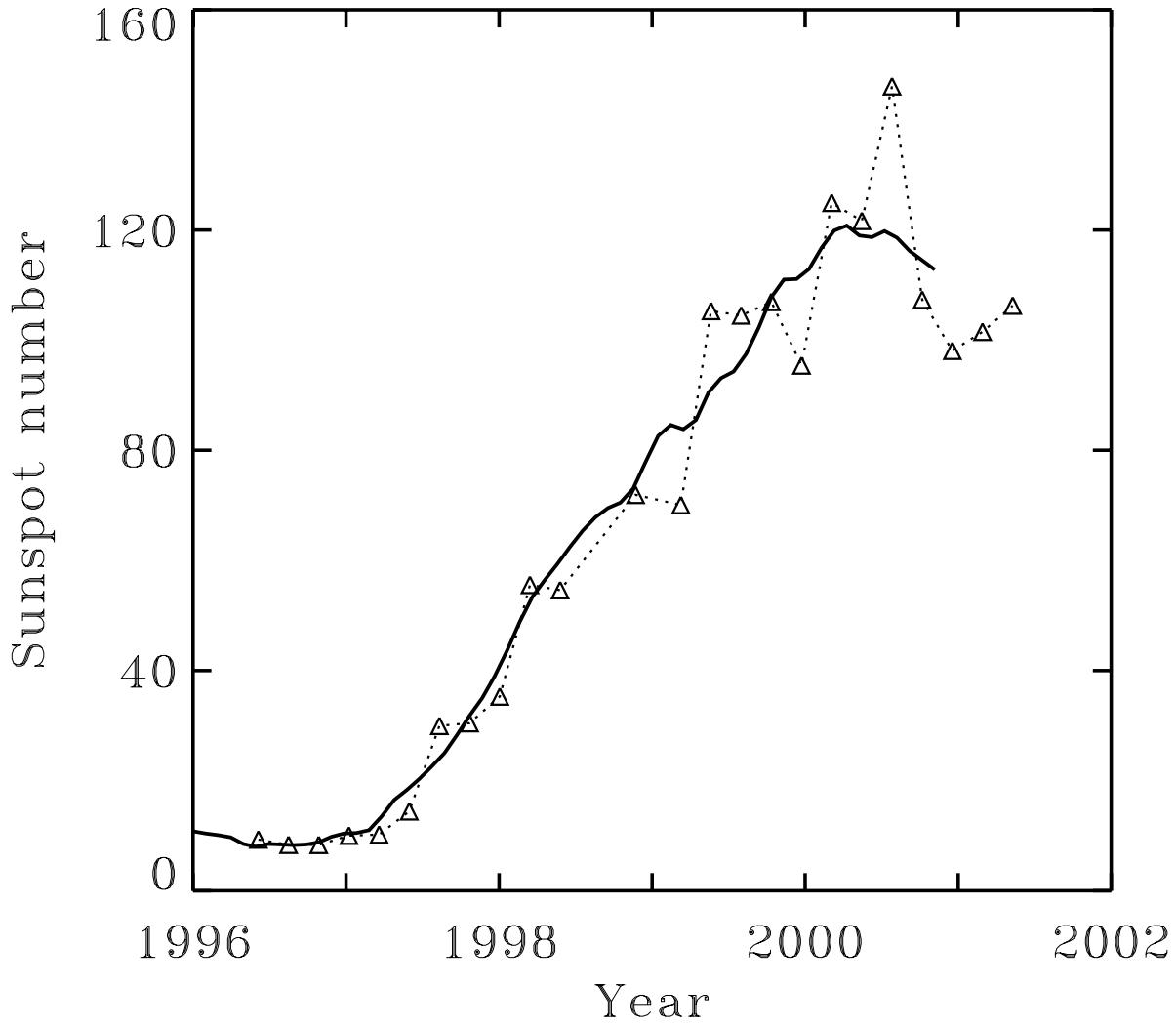
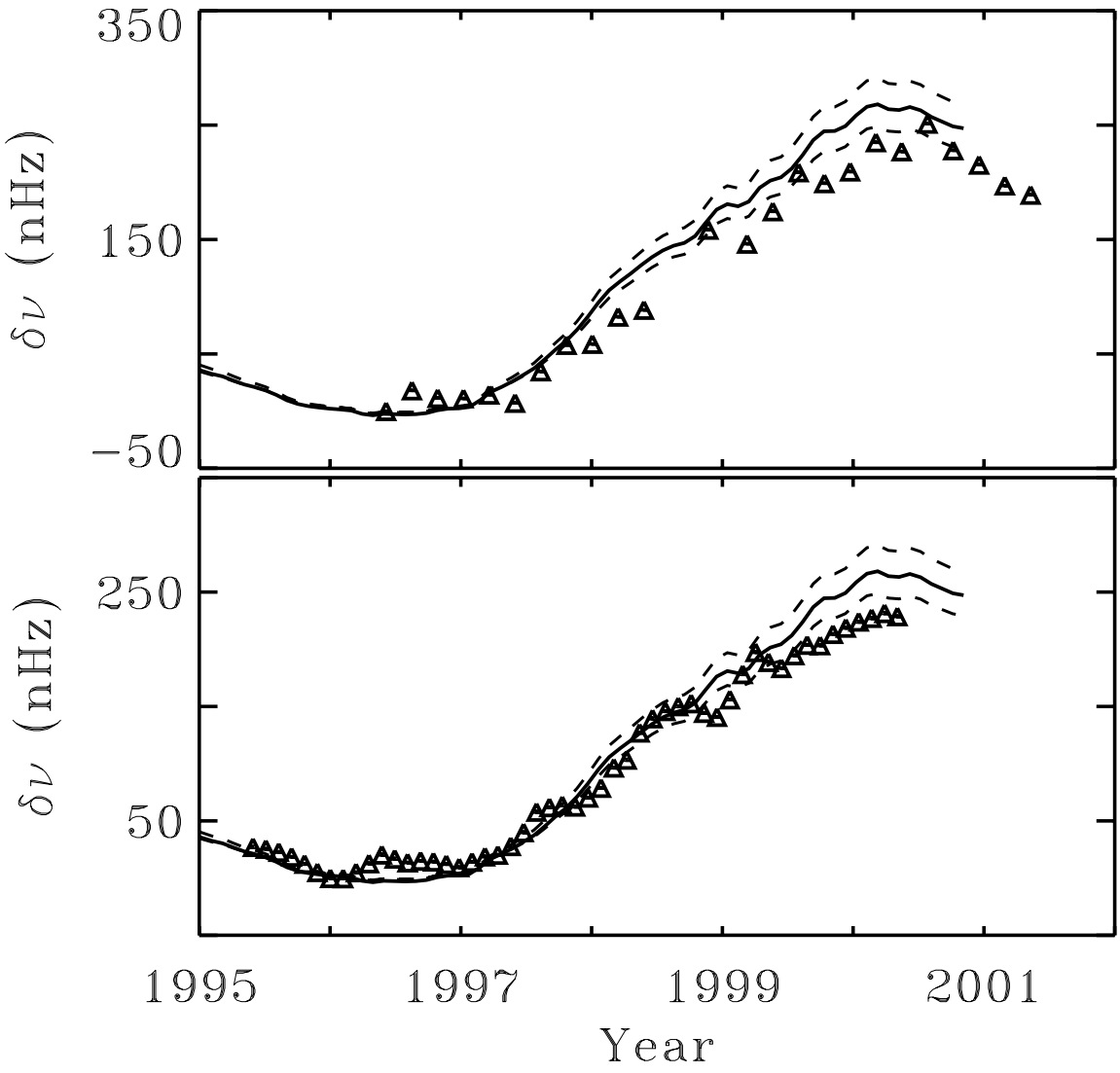
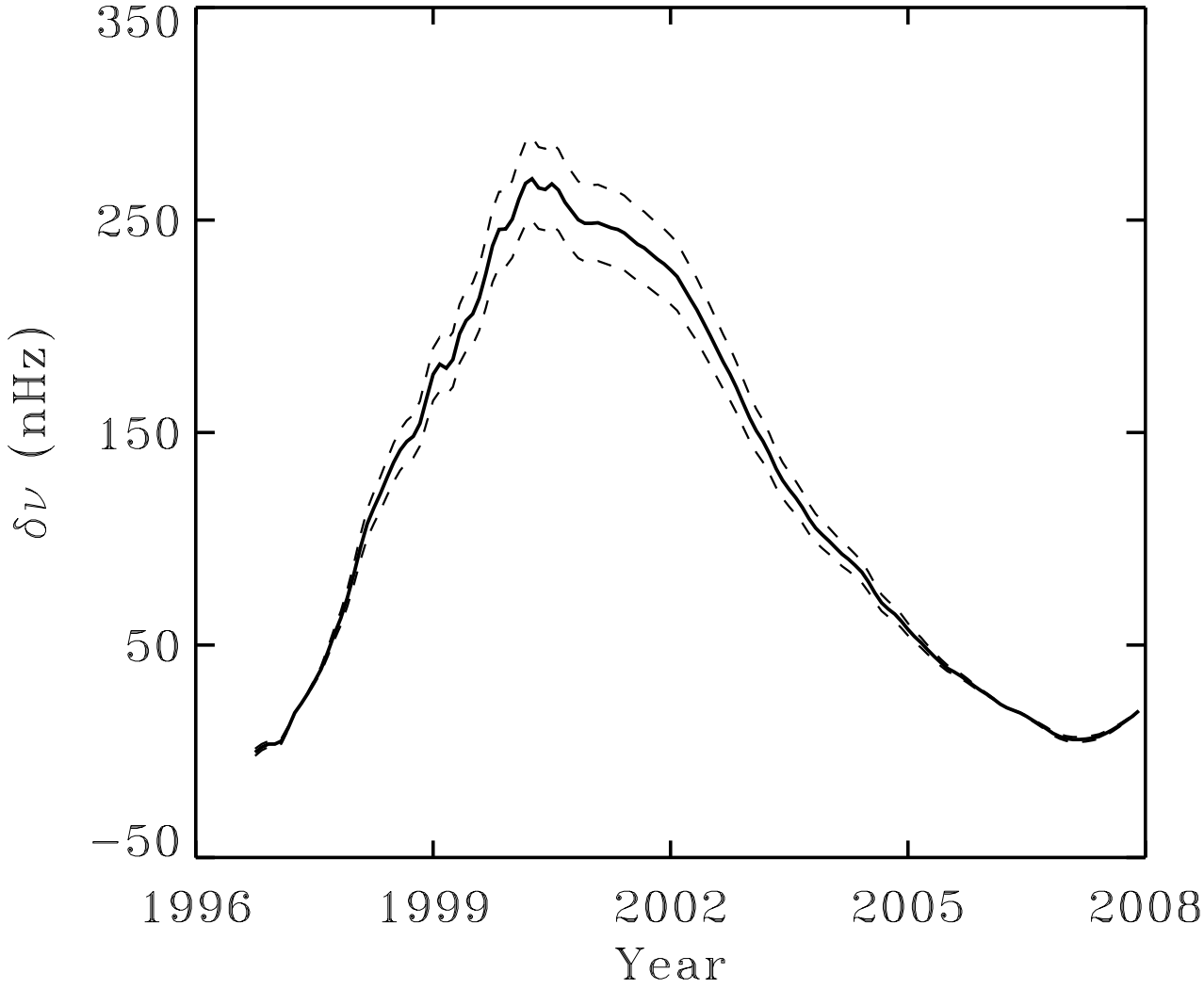
kluwer guessConjecture document article opening HOW GOOD ARE THE PREDICTIONS FOR OSCILLATION FREQUENCIES? KIRAN JAIN S. C. TRIPATHY A. BHATNAGAR JAIN, TRIPATHY, AND BHATNAGAR PREDICTIONS FOR OSCILLATION FREQUENCIES Udaipur Solar Observatory, A unit of Physical Research Laboratory, Off Bari Road, Dewali, P. B. No. 198, Udaipur 313001, India

abstract We have used available intermediate degree p-mode frequencies for the solar cycle 23 to check the validity of previously derived empirical relations for frequency shifts (Jain *et al.*: 2000, *Solar Phys.* **192**, 487). We find that the calculated and observed frequency shifts during the rising phase of the cycle 23 are in good agreement. The observed frequency shift from minimum to maximum of this cycle as calculated from MDI frequency data sets is 251 $\pm$ 7 nHz and from GONG data is 238 $\pm$ 11 nHz. These values are in close agreement with the empirically predicted value of 271 $\pm$ 22 nHz.


160
120
80
40
0
Sunspot number
1996
1998
2000
2002
Year


350
150
−50
$\delta\nu$ (nHz)
250
50
$\delta\nu$ (nHz)
1995
1997
1999
2001
Year


350
250
150
50
−50
$\delta\nu$ (nHz)
1996
1999
2002
2005
2008
Year